Pedestrian and Bicycle Plan for the City of Lacey and Lacey UGA





Acknowledgments

City of Lacey

Melissa Anderson
Berl Colley
Paul Enns
Jessica Gould
Duncan Green
Chris Hawkins
Jack Horton
Bill Jackson
Chuck Kennedy
Cleo Pineda
Charles "Chazz" Pope
Bill Spaulding
Brandon Stephens
Casey Wilson

Citizen Advisory Committee Members

Table of Contents

Introduction	5
Plan Purpose	6
What We Heard from the Community	7
Guiding Principles	
The State of Walking and Biking in Lacey and the Lacey UGA	9
Existing Pedestrian and Bicycle Networks	10
Existing Plans and Policies	14
Proposed Solutions	15
Technical process	16
Pedestrian Network Recommendations	17
Bicycle Network Recommendations	17
Pedestrian and Bicycle Spot Improvements	19
Pedestrian and Bicycle Facility Design	19
Benefits of the Proposed Network	23
Policy and Program Support Recommendations	24
Make It Safe	24
Make It Connected	
Build Momentum	
Implementation	31
Priority Projects	
Build Momentum Projects	
Funding This Plan	

This page intentionally left blank.

Introduction

The City of Lacey is a community where people enjoy a high quality of life as is reflected in its natural beauty, outdoor recreational opportunities, outstanding schools, healthy economy and proximity to major metropolitan areas. These attributes are what draw young families, retirees and others to live in Lacey. As Lacey transitions to a more urban community, a safe, well-connected, and efficient multimodal transportation system will be vitally important to maintain this high quality of life.

The City's Transportation Plan (2012) calls for increasing the share of all trips made safely and conveniently by walking and biking. Its Comprehensive Plan (2016) states as a goal to "Prioritize and encourage bicycle and pedestrian trips by providing a safe, wellconnected, and convenient bicycle and pedestrian circulation network throughout the City," and calls for the development of a pedestrian and bicycle plan to inventory existing facilities, identify deficiencies, and identify capital improvements.

Plan Purpose

This is the City of Lacey's first Pedestrian and Bicycle Plan. It presents policies, programs and infrastructure recommendations that aim to improve the connectivity, safety and comfort of the City's walking and biking networks so that people of all ages and abilities can safely access the many great community assets within the City of Lacey and its Urban Growth Area (UGA). National research shows that a large segment of the population (approximately 51%) would be willing to ride a bicycle if they felt more comfortable and safe doing so (the so called "interested but concerned"). Greater separation from motor vehicles and slower speed environments are among the attributes that contribute to the interested but concerned population feeling more safe and willing to ride a bike. Likewise, the attributes that comprise an attractive walking environment are well-documented and include active streetscapes, buffers from motor vehicles, convenient and safe crossings and direct routes to destinations. With this Plan, the City endeavors to identify specific actions for making walking and biking more attractive, and in doing so, increase the number of people who choose these travel modes for a variety of trip purposes.

This Plan is incorporated into the City's Transportation Plan to guide the City's investments and other efforts to promote walking and biking as viable transportation options. This Plan also presents infrastructure recommendations for Lacey's UGA (unincorporated Thurston County) where the City and Thurston County coordinate planning and implementation efforts.



Source: Dill, Jennifer and McNeil, Nathan, Revisiting the Four Types of Cyclists: Findings from a National Survey, Transportation Research Record: Journal of the Transportation Research Board, January 12, 2016.

What We Heard from the Community

This Plan was informed by robust stakeholder outreach, including public events, focus group meetings, an online survey, and an online mapping tool. A Citizen Advisory Committee (CAC) was also convened to guide the Plan's development, and to evaluate the Plan's recommendations through its diverse collection of perspectives. The community engagement process provided key insights into community members' view of existing conditions, network deficiencies, and what is needed to make walking and biking trips safer and more desirable in Lacey and its UGA. The table below highlights the recurring themes that emerged from the public outreach effort:

Recurring Themes from Public Outreach Efforts

There's high demand for more shared-use paths and other separated, high-comfort facilities.

Gaps in the existing pedestrian and bicycle network discourage and sometimes prevent people from making trips on-foot or by bicycle.

Lack of connections and access to existing pedestrian and bicycle facilities, transit, and popular destinations (schools, businesses, parks, neighborhoods) make walking and riding a bike challenging. The City should not overlook small connections to major facilities.

There's a need for a high-comfort bike network throughout Lacey and the UGA; that will encourage people of all ages and abilities to confidently and comfortably ride a bicycle.

It's difficult and uncomfortable to cross major streets. The existing pedestrian and bicycle crossing opportunities are few and far between.

There's high demand for pedestrian and bicycle amenities (benches, lighting, shelter, restrooms, etc.) at popular areas such as the Woodland Trail, Chehalis Western Trail, Depot District, and along commercial corridors.

There needs to be safer travel behaviors from all community members when they are driving, walking, and riding a bike.

There needs to be a simple and clear wayfinding system that directs pedestrians and bicyclists to popular destinations and to high-comfort routes.

There aren't enough secure bike parking. This lack of facilities discourage potential bike trips.

Available right-of-way should be secured for future bicycle and pedestrian network improvements and connections. "There's a school at the corner of Steilacoom and Marvin. I find it shocking that there's not even a sidewalk for kids to walk or ride their bikes."

"Lots of exciting things are happening at this park. My family often rides our bikes here. It's not very convenient to ride. There is a mixture of bike lanes, residential, busy road crossings, having to ride against traffic, and sidewalks that are required to get there. No seamless routes."

"There are no good pedestrian crossings for most of Ruddell Road. This road bisects neighborhoods and without risking life and limb or a car, you can't cross."

> "The I-5 trail in Lacey is fantastic!"

"We love the parks in Lacey! My family and I ride our bikes to many of them!"

> "Make partnerships with large landowners for trail connections."

Guiding Principles

Stakeholder input and an analysis of existing conditions (see Section II) revealed common themes around what is needed to make Lacey a safer, more comfortable and convenient place to walk and bike. These common themes have been distilled into the following three Guiding Principles and supporting action statements, which provide the framework for the Proposed Solutions presented in Section III.



Make It Safe

- 1. Design for people of all ages and abilities.
- Improve the safety and convenience of pedestrians and bicyclists via contextsensitive designs and targeted improvements at intersections and crossings.
- Promote safe travel behaviors through partnerships with local agencies and organizations with aligned missions.



Make It Connected

- Create a built environment that makes walking and biking convenient and attractive.
- Fill gaps in the existing network, and link neighborhoods, major destinations and transit with small connections that make big impacts Improve and create new connections and access to trails.



Build Momentum

- Utilize available right-of-way, and remove existing barriers along walking and biking routes and trails to improve the connectivity and safety of walking and biking routes.
- Encourage walking and biking trips by improving network navigability and legibility (wayfinding and signage) and pedestrian and bicycle amenities (benches, lighting, restrooms, secure bike parking facilities).
- 3. Promote active transportation through encouragement activities such as community events and working with employer Commute Trip Reduction programs to better understand the needs of commuters.

2

The State of Walking and Biking in Lacey and the Lacey UGA

An existing conditions analysis was conducted to better understand and identify the strengths and challenges of the walking and biking networks in Lacey and its UGA. This analysis consisted of public input received through in-person communications and online platforms, engaging the Citizens Advisory Committee, a review of existing data, plans, policies and programs, field observations, and engaging City of Lacey staff. The existing conditions analysis informed pedestrian and bicycle project recommendations included in Section III. A summary of the existing conditions analysis is provided below. More detail on the public input received and the specific components of the analysis are provided in Appendices A and B.

Existing Pedestrian and Bicycle Networks

According to the US Census American Community Survey (ACS) 2016 5-year estimates, 1.92% of people commute to work by either walking or riding a bicycle. This commute to work mode share is slightly higher than all of Thurston County (1.08%) but quite low compared to the City Olympia (7.97%). However, these commute to work rates should be taken with a grain of salt. The ACS estimates only counts the primary mode used to commute to work, so for trips to work that include multiple modes, such as using a bicycle and transit, the mode used for the longest distance is counted. Additionally, the ACS only records commute trips to work and excludes commutes to school, recreational trips, or trips to run errands. According to Commuting in America 2013: The National Report on Commuting Patterns and Trends, commute trips only represent approximately 15% of overall travel. Therefore, the US ACS data provides a limited snapshot into bicycling and walking in Lacey.

The pedestrian network is made up of sidewalks, crossings, shared use paths, and amenities such as lighting. benches, and shelters at transit stops. While there are sidewalks in many neighborhoods and along many of the City's major streets there are notable sidewalk gaps that present barriers to people walking, particularly people with disabilities. Sidewalk gaps are even more prevalent in the City's UGA where many streets were constructed without there being a sidewalk standard in place. Other barriers to walking include infrequent crossing opportunities along some corridors, or unsignalized crossings that are uncomfortable due to the volume and speed of traffic and number of traffic lanes that must be crossed. Stakeholders also noted long wait times for a "walk" signal and a short amount of time given to pedestrians crossing the street as a challenge at some signalized intersections. Lastly, land use patterns and lack of connectivity in the street network in some areas make walking trips less viable and attractive.

Figure 1 shows the existing pedestrian network. The map shows a network of sidewalks with both small and large gaps along major roadways and many residential streets not having sidewalks. These sidewalk gaps disconnect residents to popular destinations, discourage walking for recreation, makes it difficult to make everyday trips on-foot. Input received from the public and field observations noted the absence of sidewalks connecting to schools often leads to children and teenagers walking in the street or in ditches. Long distances between pedestrian crossings can lead to people choosing to cross mid-block where they are not expected by motorists.



Crossing of a multi-lane, high-speed roadway.

Pedestrian Network Characteristics:

- Large number of sidewalk gaps
- Absence of sidewalks on many residential streets
- Lack of pedestrian amenities (benches, lighting, bus shelter, and restrooms along trails)
- Several major roads with transit do not have sidewalk connections to bus stops
- Missing pedestrian connections to schools, commercial areas, and parks
- Few crossing opportunities along major roads
- Road network has fairly low connectivity (dead end streets and cul-de-sacs) making distances to destinations longer

The City of Lacey has several popular shared use paths that connect to commercial corridors, parks, employers, schools, St. Martins University, and to the City of Olympia. Generally, these facilities received high praise from the public and there is a desire to expand Lacey's shared use path network while also improving certain aspects of existing paths such as crossings of major streets.

Existing Pedestrian Network





Figure 1: Existing Pedestrian Network

Like the pedestrian network, the existing bicycle network presents barriers that can make riding a bicycle uncomfortable and challenging, particularly for less confident bicyclists. There are many bicycle lanes and ridable shoulders throughout Lacey and the UGA (see Figure 2). However, there are notable gaps in the network, which can make bicycling challenging and unattractive to a large segment of the population. A series of bike counts were conducted throughout the city to capture where people are currently bicycling. Shared use paths had the highest ridership compared to on-street facilities.

A level of traffic stress (LTS) analysis was conducted to determine which streets are comfortable for the "interested but concerned" portion of the population, which prefers greater separation from motor vehicles or riding along streets with low vehicle speeds and volumes. This analysis revealed that many of Lacey's existing bicycle network offers a low level of comfort for the less confident bicvclist and that streets and facilities that are more likely to be comfortable for these users are largely disconnected. While many people would feel comfortable riding on neighborhood streets with low vehicle volumes and speeds, trips on major streets are necessary for accessing most destinations. Public input revealed a high demand for safer and more comfortable routes, more shared use paths, direct and contiguous routes to destinations, and safer crossings at major road intersections. More information on the LTS analysis can be found in Appendix A.

Bicycle Network Characteristics:

- Shared use paths are well used relative to on-street bike facilities
- There are notable gaps in existing bikeway network
- Barriers in existing network (debris in bike lanes, narrow bridge crossings, not enough separation from traffic)
- There are few bicycle lanes in the UGA
- Wayfinding signage that directs bicyclists to destinations and other routes is lacking
- Many existing on-street bike facilities do not provide a high level of comfort for less confident bicyclists.
- There is a lack of secure bike parking at destinations
- The street network provides fairly low connectivity (dead end streets and cul-de-sacs) making distances to destinations longer and limiting route options



Standard bike lanes on arterials with high speed traffic generally do not attract the less confident cyclists.



Shared use paths like the Karen Fraser Woodland Trail are well liked and well used in Lacey.

Existing Bicycle Network





Figure 2: Existing Bicycle Network

Existing Plans and Policies

The City of Lacey and Thurston Regional Planning Council both have plans and policies in place emphasizing the importance of developing transportation systems that serve all users and contribute to community quality of life and economic vitality.





Construct safe sidewalks and effective crossings throughout the city, within an appropriate radius of schools and within districts with a pedestrian emphasis.

– 2030 Transportation Plan

Prioritize and encourage bicycle and pedestrian trips by providing safe, well-connected, and convenient bicycle and pedestrian circulation network throughout the City.

– Lacey Comprehensive Plan (2016), Land Use Element

Ensure transportation system investments support the special travel needs of youth, elders, people with disabilities, literacy, or language barriers, those with low incomes, and other affected groups.

– What Moves You: The Regional Transportation Plan 2040 for the Thurston Region (2016)

Encourage land development proposals to utilize the full capacity of the existing multimodal transportation system, especially transit and non-motorized modes.

– Lacey Comprehensive Plan (2016), Land Use Element

Ensure that destination sites, including job centers, commercial areas, office complexes and other economic development generators are connected with multimodal transportation options.

- Lacey Comprehensive Plan (2016), Land Use Element

Increase the share of all trips made conveniently and safely by walking and biking.

 2030 Transportation Plan
What Moves You: The Regional Transportation Plan 2040 for the Thurston Region (2016)



Encourage the provision of short- and long-term bicycle parking and other supporting facilities at schools, employment sites, and major activity centers.

– 2030 Transportation Plan

Proposed Solutions

Proposed solutions consist of bicycle and pedestrian network recommendations and policies and programs that support walking and biking in Lacey and its UGA and the three guiding principles of Make it Safe, Make it Connected and Build Momentum. This section defines the various types of bicycle and pedestrian network recommendations and displays specific projects on three maps: Pedestrian Segments, Bicycle Segments and Spot Improvements. Network recommendations are followed by policy and program recommendations organized around the guiding principles and other key themes that emerged from the stakeholder process.

Technical process

Network recommendations were developed to build upon and improve the existing bicycle and pedestrian networks with a goal to improve safety, comfort, convenience, and connectivity. The technical process for developing recommendations is described below.

5013

Identified high crash corridors and hot spots.

Located gaps and missing connections in existing network.

Reviewing input from public outreach efforts (WikiMap, online survey, CAC member input, and public events) and identified themes and problem locations.

Reviewed findings from the level of traffic stress analysis to determine existing roadway suitability and visualize how comfortable each street is to ride a bicycle based on vehicle speeds, existing facilities and other factors.

Incorporated planned pedestrian and bicycle projects from the City of Lacey 2030 Transportation Plan, Transportation Improvement Program and recommended Safe Routes to School developed by Thurston County.

A draft of recommended solutions was developed using the existing conditions and current planned project to create a well-connected, safe, and comfortable environment for people of all ages and abilities to confidently walk and ride a bicycle.

Presented draft solutions to the CAC and City of Lacey staff to get input.

Refined proposed solutions and integrated into a draft plan for public review based off feedback.

Pedestrian Network Recommendations

Pedestrian network recommendations aim to improve connections to destinations, close network gaps, and improve safety so people of all ages and abilities can make trips on-foot (see Figure 3 for a map of pedestrian network recommendations and Table C.2 and C.3 in Appendix C for corresponding descriptions of the recommended projects).

Sidewalk Connections

Sidewalk connections are locations where the installation of a sidewalk is recommended to improve pedestrian access to destinations. These locations currently have missing sidewalks that make it challenging to complete a walking trip. Input received from the online survey and map were used to identify specific locations where there is demand for sidewalks to be built. Several of these sidewalk connections were pulled from planned pedestrian projects included in the City of Lacey 2030 Transportation Plan.

In some cases sidewalk connections may entail low-cost solutions such as delineating roadway space using physical barriers such as c-curb or wheel stops to create a space for people to walk. Such solutions would improve safety while avoiding the high cost of installing curb, gutter and associated stormwater infrastructure.

Pedestrian Focus Route

Pedestrian focus routes were developed using public input and existing Thurston County Safe Routes to School maps. These projects show recommended routes for students to use so they can comfortably and safely walk to school. However, these routes may currently have sidewalks gaps, challenging street crossings, visibility concerns, or sidewalk obstructions. Each pedestrian focus route should be field reviewed to develop specific recommendations that would improve safety and comfort.

Bicycle Network Recommendations

Bicycle network recommendations aim to improve network connectivity, safety, level of comfort, and convenience so more people can travel by bicycle throughout Lacey with confidence (see Figure 4 for a map of bicycle network recommendations and Table C.4 and C.5 in Appendix C for corresponding descriptions of the recommended projects). The bicycle solutions are broken out into three categories; major street connections, neighborhood connections, and off-street connections (applies to pedestrians as well).



Low-cost alternative to constructing sidewalks with curb and gutters.



The Judd Bike Street is a good example of a Neighborhood Connection project.

Bike

Major Street Connection

Major street connections are on-street bike facilities located on arterial or collector streets. These recommendations aim to close existing network gaps, improve connections to destinations, and provide a comfortable and safe route for people to ride a bicycle. Bike facilities along these routes should incorporate designs that exceed minimum standards (i.e. wider than 5 feet or buffered bike lanes) to provide a higher level of comfort and safety.

Neighborhood Connection

Neighborhood connections are lowstress routes on local streets that connect to parks, schools, commercial areas, and existing bike facilities. These routes are designed to support bicycling for people of all ages and abilities and incorporate traffic calming measures, enhanced wayfinding, pavement markings and signage, crossing improvements at major streets, and improved access at popular destinations. Neighborhood connections aim to provide alternative routes to major streets which are typically more stressful and less appealing to bicycle on.

Off-Street Connection

Off-street connections include new shared use paths, upgrades to existing shared use paths, and short connections to existing shared use paths or destinations. Several of these projects were pulled from the City of Lacey 2030 Transportation Plan and others were identified from public input. These proposed solutions aim to improve access to destinations and provide safe and comfortable routes for people of all ages and abilities.





Pedestrian and Bicycle Spot Improvements

Pedestrian and bicycle spot improvements are site-specific solutions to eliminate physical barriers, improve bridge crossings, provide wayfinding, and enhance major street crossings. Many of these spot improvements are part of larger pedestrian and bicycle network improvements, and are intended to highlight locations where heightened attention is required (see Figure 5 for a map of pedestrian network recommendations and Table C.6 and C.7 in Appendix C for corresponding descriptions of the recommended projects).

Pedestrian and Bicycle Facility Design

The City of Lacey recognizes that there is an evergrowing demand for better connected and higher comfort pedestrian and bicycle infrastructure as residents seek to have more transportation choices, save on transportation costs, and integrate physical activity into their daily routines. When integrating pedestrian and bicycle facilities into roadways there are often competing needs for available roadway space and signal operations. To the extent feasible, the City will look for opportunities to optimize roadway space for people walking and biking while balancing other modal needs. The City has developed a Bicycle and Pedestrian Facility Design Guide that is informed by best practices and presents considerations and guidance on a large number of bicycle and pedestrian facilities. The Design Guide supplements the City's Public Works Development Guidelines, which contains transportation system standards.



Lacey has many connections to parks and schools that would benefit from wayfinding signage.



Pedestrian Segment Recommendations





Figure 3: Recommended Pedestrian Segment Projects

The numbers displayed next to the recommended projects correspond to the Plan ID listed in Table 1: Build Momentum Projects and in Appendix C.

Bicycle Segment Recommendations





Figure 4: Recommended Bicycle Segment Projects

The numbers displayed next to the recommended projects correspond to the Plan ID listed in Table 1: Build Momentum Projects and in Appendix C.

Spot Improvement Recommendations





Figure 5: Recommended Spot Improvement Projects

The numbers displayed next to the recommended projects correspond to the Plan ID listed in Table 1: Build Momentum Projects and in Appendix C.

Benefits of the Proposed Network



More connectivity and fewer barriers to people walking and biking





More transportation choices



More opportunities for residents to be physically active in their everyday lives



Better connections to trails and parks



Improved access to schools and community centers



Streets that are more comfortable and safe for walking and biking



Improved access to businesses

Policy and Program Support Recommendations

The City of Lacey has a good policy foundation that supports walking and biking. This Plan builds upon this foundation and identifies specific actions to further strengthen the City's and its partners' support for walking and biking. Below are policy and program recommendations organized around the three principles of MAKE IT SAFE, MAKE IT CONNECTED and BUILD MOMENTUM and key themes that emerged from the stakeholder process. Each recommendation consists of an action and an entity (or entities) that are responsible for leading or supporting the action.



Develop a Network for All Ages and Abilities. Lacey's bicycle and pedestrian network should be accessible, convenient, and safe for all ages and abilities.

Recommendations:

Actions		Responsi	ible Entity
	Actions	Lead	Support
1A	Update the Public Works Development Guidelines to reflect best practices in multimodal street design.	Lacey Public Works	Community & Economic Development
1B	Where feasible, provide additional separation between people walking and biking, and motor vehicles.	Lacey Public Works, Thurston County Public Works (UGA)	Community & Economic Development
1C	Where direct routes are feasible, explore all opportunities to connect neighborhood streets with low vehicle volumes and speeds, and enhance these streets for comfortable walking and biking.	Lacey Public Works, Thurston County Public Works (UGA)	Community & Economic Development
1D	Design intersections and mid-block crossings to be intuitive, convenient and responsive to the needs of all pedestrians and bicyclists, including the most vulnerable users (i.e. children, seniors, and persons with disabilities).	Lacey Public Works Thurston County Public Works (UGA)	Community & Economic Development
1E	Where possible, implement signal strategies such as protected walk/bike phases, leading pedestrian intervals, providing additional crossing time, and minimizing wait times, particularly in areas with higher pedestrian volumes or during periods with high pedestrian volumes such as school dismissal times.	Lacey Public Works Thurston County Public Works (UGA)	Community & Economic Development
1F	Provide crosswalk enhancements at unsignalized crossing locations per the Federal Highway Administration's <u>Guide for Improving Pedestrian</u> <u>Safety at Uncontrolled Crossing Locations</u> . (see also recommendation 4D)	Lacey Public Works Thurston County Public Works (UGA	Community & Economic Development





Educate System Users. Education should be a key component of the City's efforts to promote walking and biking. Education should include spreading knowledge to all roadway users on the rules of the road, safety, and how emerging technologies (such as e-bikes or bike share) should operate in Lacey's active transportation network. Similar to encouragement efforts, the City should look to partner with other local agencies and organizations that share similar goals in educating the public about safe travel behaviors, such as the Thurston County Public Health and Social Services Department, Intercity Transit, North Thurston Public Schools, and advocacy organizations.

Recommendations:

Specific education programs that should be explored include:

Actions		Responsi	ible Entity
		Lead	Support
2A	Partner with agencies such as Thurston County Public Health to develop safety messaging aimed at all roadway users, which can be disseminated in a variety of ways including billboards, PSAs, bus placards, utility bills, social media, and at events.	Lacey Public Affairs	Thurston County Public Health & Social Services Lacey Police Department Intercity Transit
2B	Signage that accompanies installations of new bicycle or pedestrian engineering treatments that have not previously been installed in the City of Lacey to inform roadway users how to use or interact with the treatment.	Lacey Public Works	Community & Economic Development Public Affairs

Enforce the Rules of the Road. Enforcement plays a

vital role in correcting improper and unsafe behavior by all roadway users, and promoting walking and biking as safe transportation and recreation options.



Recommendations:

Because the City of Lacey Police Department's resources may limit how much additional enforcement activities it can take on, the following enforcement-related programs should be explored:

Actions		Responsi	ble Entity
	ACTIONS	Lead	Support
3A	Officer training about laws pertaining to bicyclists and pedestrians, including where bicyclists can ride, how motorists should interact with bicyclists (i.e. 3-foot law, aggressive driving), the Vulnerable User Law, E-bike legislation, and what constitutes a legal crossing. Officers should also be trained on new engineering treatments so they understand how they're supposed to work with existing laws.	Lacey Police Department Thurston County Sherriff's Office (UGA)	Public Works
3B	Automated enforcement, including speed and red-light cameras.	Lacey Police Department Thurston County Sherriff's Office (UGA)	Public Works Public Affairs
3C	Targeted enforcement of behaviors that commonly contribute to crashes and serious injuries and fatalities, including speeding, failure to yield and non-compliance with traffic-control. Other behaviors such as riding a bicycle at night without lights and wrong-way riding should be addressed through education.	Lacey Police Department Thurston County Sherriff's Office (UGA)	Public Works Public Affairs



Build a Connected Network. The pedestrian and bicycle networks should be planned and built to create a connected network that not only connects origins to destinations within the City of Lacey, but also serves as an important piece of the regional active transportation network.

Recommendations:

Actions		Responsible Entity	
	Actions	Lead	Support
4A	Opportunities to provide short connections to trails, between local neighborhood streets and to activity centers should be fully explored to improve the convenience of walking and biking.	Public Works	Parks & Recreation Woodland Trail Greenway Association
4B	Develop regulations and codify requirements for block size and street connectivity for new development to ensure such development is well-integrated with the surrounding transportation network and has a connected street network that disperses traffic and provides convenient and comfortable mobility to people walking and biking.	Community & Economic Development	Public Works
4C	Where an arterial or collector road is the only possible option for providing a bicycle and pedestrian network connection, and there are not opportunities to provide additional physical separation between people walking and biking and motor vehicles, the following speed management strategies should be explored: reduction in number of vehicle lanes where it is determined there is excess vehicle capacity, lane narrowing where vehicle travel or turning lane width is greater than 11 feet, signal timing, introducing visual friction to the roadway such as trees, and lowering the posted speed limit using FHWA-endorsed methods for setting speed limits such as USLIMITS2 or the "injury minimization" approach.	Public Works	Community & Economic Development
4D	Provide sidewalks along both sides of the road, and additional opportunities to cross major roads in proximity to schools, parks and recreation facilities, and transit stops. Crossings should be enhanced per the per the Federal Highway Administration's <u>Guide for Improving</u> . <u>Pedestrian Safety at Uncontrolled Crossing Locations</u> .	Public Works	North Thurston Public Schools Intercity Transit
4E	Support schools that are actively involved in the Bike and Pedestrian Safety Education program (aka Bikes in PE) by making infrastructure investments that expand pedestrian and bicycle access to these schools.	Public Works	North Thurston Public Schools Community & Economic Development
4F	Better integrate walking and bicycling with transit so these modes are a competitive alternative to driving. This means prioritizing sidewalks and bicycle facilities that connect to transit stops that are, or have potential to be, heavily used given surrounding land uses.	Public Works	Intercity Transit Community & Economic Development

1 Achieving Multimodal Networks: Design Flexibility and Reducing Conflicts, FHWA, 2016. https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_networks/ **Capitalize on Lacey's Trail System**. Stakeholder input and research both confirm people's preference for trails, especially those that are looking to start walking or bicycling more or those uncomfortable mixing with vehicular traffic. The Chehalis Western, Woodland and I-5 trails serve as a backbone of Lacey's pedestrian and bicycle network, particularly within the western, more densely developed portion of the city. The City of Lacey will continue to collaborate with Thurston Regional Planning Council, Thurston County and the City of Olympia to expand the regional trail network and implement programs that improve safety, coherence and maintenance, and promote the trail network as a regional draw for residents and visitors alike.

Recommendations:

Actions		Respons	ible Entity
	ACUUIIS	Lead	Support
5A	When possible, the City should be opportunistic in acquiring rights-of-way and land for trails, particularly within the eastern portion of the City and the City's UGA. Specifically, the City will partner with Thurston County and Thurston Regional Planning Council to develop a strategy to extend the Karen Fraser Woodland Trail to the east, should the right-of-way become available.	Public Works	Parks & Recreation, Community & Economic Development Thurston Regional Planning Council Woodland Trail Greenway Association
5B	New developments near trails should be required to make easy connections to trails and the City should work with existing developments adjacent to existing trails to make such connections.	Community & Economic Development	Parks & Recreation Woodland Trail Greenway Association
5C	Trail crossings should be improved to better ensure safety for trail users (see Recommendation 4A).	Public Works	Parks & Recreation
5D	Wayfinding (see Recommendation 7B)		
5E	Organize community rides (see Recommendation 8C)		

Consider Multimodal Level of Service. Cities are required to establish vehicle level of service standards (LOS) for arterial roadways as part of concurrency requirements of the state Growth Management Act. Concurrency refers to the timely provision of public facilities and services relative to the demand for them. Traditionally, transportation concurrency has been focused on vehicle level of service (i.e., the level of delay), but there is some flexibility in how cities structure their concurrency policy and what they require in terms meeting the transportation demand generated by new development. For example, the Cities of Bellevue and Bellingham, WA have implemented Multi-Modal Level of Service (MMLOS) and developed performance measures that include sidewalks, bike lanes, transit, shared use paths, as well as automobiles. By doing so, these cities can meet travel demand while providing a greater number of transportation choices to both existing and new residents. More about MMLOS can be found at http://www.trb.org/Main/Blurbs/160228.aspx.

Recommendations:

Actions		Responsible Entity	
Actions	Lead	Support	
6A	As a strategy for improving walking and biking network connectivity and safety, the City of Lacey should research and consider implementing Multi-Modal Level of Service (MMLOS) standards to augment the City's Strategy Corridors and integrate performance measures that include sidewalks, bike lanes, transit, shared use paths, as well as automobiles.	Public Works	Community & Economic Development



Implement Easy Wins. The City can pursue relatively low-cost strategies to further demonstrate its commitment to improving walking and biking conditions, and to build momentum and support for the implementation of the additional recommendations in this Plan.

Recommendations:

Actions		Responsible Entity	
	Actions	Lead	Support
7A	Provide walking- and biking-related information and resources on the City's website.	Public Affairs	Community & Economic Development Police Department
7B	Implement a city-wide wayfinding program to help people navigate the pedestrian and bicycle networks, and access community destinations with confidence. This may entail coordination with efforts by Thurston Regional Planning Council to establish wayfinding on the regional trail network.	Public Works	Community & Economic Development Parks & Recreation Thurston Regional Planning Council
7C	Update the city development code's bicycle parking requirements for new development to ensure sufficient secure, convenient parking is provided for different land uses (see Lacey's Bicycle and Pedestrian Facility Design Guide for more details). The City should also consider a combination of requirements and incentives for commercial developments to provide other end-of-trip facilities such showers, repair stations, and lockers.	Community & Economic Development	Public Works
7D	Encourage existing development to install secure and convenient bike parking, including secure and sheltered bike corrals within major shopping areas to facilitate one-stop shopping Encouragement efforts might include mechanisms such as the Bicycle-Friendly Business Program ¹ , outreach and promotion, waiving permit fees, providing information on bike rack manufacturers and installers, cost-sharing or grant funding provided by the City or one of its partners such as Thurston Regional Planning Council or Thurston County Public Health.	Community & Economic Development	North Thurston Public Schools Thurston County Public Health & Social Services Public Affairs Lacey Chamber of Commerce
7E	Reallocate underutilized right-of-way to better accommodate walking and biking with new or enhanced infrastructure. Explore the use of low-cost materials such as paint, flexposts, and wheel stops as an interim measure to evaluate performance or until permanent modifications can be funded.	Public Works	Community & Economic Development Parks & Recreation
7F	Remove unnecessary barriers that impede access to public property, such as fences and network gaps. Public property can serve as both key community destinations, and important network connections.	North Thurston Public Schools Community & Economic Development	Thurston County Public Health & Social Services Parks & Recreation



2 The Bicycle-Friendly Business Program is offered by the League of American Bicyclists to recognize businesses that encourage bicycling among their employees, customers, and local community. Additional information about the Program is available online at, <u>https://bikeleague.org/business</u>.

Create and Expand Programs that Encourage Walking and Biking. In addition to providing infrastructure that makes walking and biking attractive transportation and recreation options, programs that promote these modes as healthy, fun and acceptable ways for getting around are important for encouraging more people to consider these options. The City should look to partner with other local agencies and organizations that share similar goals in encouraging residents to walk and bike, such as the Thurston County Public Health and Social Services Department, Intercity Transit, North Thurston Public Schools, and advocacy organizations.

Recommendations:

The City should continue to:

	Actions		ible Entity
			Support
8A	Be active partners in North Thurston School District's Safe Routes to School efforts and Intercity Transit's Walk N Roll program.	Community & Economic Development	North Thurston Public Schools Intercity Transit Public Affairs
8B	Contribute to Thurston Regional Planning Council's paper and interactive bike maps, and promote other programs and events that encourage walking and biking among a broad range of residents such as <u>Washington</u> <u>State's Bicycle Commute Guide</u> and <u>Cascade Bicycle Club's Tips for Biking and classes</u> .	Community & Economic Development	Public Works Public Affairs

Other programs and initiatives that should be pursued include:

8C	Partnering with advocacy or other organizations to host community bicycle rides and walks, open street events and bike swaps.	Community & Economic Development	North Thurston Public Schools Thurston County Public Health & Social Services Public Affairs Public Works
8D	Demonstration projects (i.e., tactical urbanism) that allow people to visualize and experience new engineering treatments intended to improve user comfort and safety. Such demonstrations may be part of an open street event.	Community & Economic Development	Public Works Public Affairs Parks & Recreation
8E	Developing a Bicycle-Friendly Business Program (or promote the League of American Bicyclists' BFB program).	Community & Economic Development	Public Affairs





Evaluate to Improve. Performance metrics should be established and periodically evaluated to understand whether changes in the bicycle and pedestrian networks or programs are increasing the mode share of walking and bicycling, improving safety for all users, and meeting the needs of the community. These measures should be relatively easy to track and the results should be shared at regular intervals with City Council, the Planning Commission, and the public. To evaluate progress in a meaningful way, good quality data is needed.

The recommended performance metrics that follow are a good starting place for tracking progress and may be added to over time. Other performance metrics to consider include: number of children walking or biking to school, number of bike racks installed, and achieving Bicycle Friendly Community recognition from the League of American Bicyclists.

Recommendations:

Actiono		Responsi	ble Entity
	Actions	Lead	Support
9A	Safety Performance Metric: Eliminate pedestrian and bicycle serious injuries and fatalities by 2035. Indicator of Success: Decrease in annual number of serious injuries and fatalities. The City has access to collision data maintained by WSDOT and should analyze this data on at least an annual basis to understand where crashes are occurring and what the contributing factors are. In addition, the City (and its partners) should consider promoting crowdsourcing applications such as http://www.bikemaps.org/ to gather information on near misses and other safety-related information that is not captured in traditional crash data. The City should also consider developing a mobile version of its <u>Citizen Request Form</u> to provide people walking and biking the ability to report safety- or maintenance-related issues as they encounter them.	Public Works	Police Department Public Affairs Parks & Recreation Community & Economic Development
9B	Connectivity Performance Metric: Number of gaps in the pedestrian and bicycle network that are filled by providing safe infrastructure and removing barriers. Indicator of Success: Increase in the total number of connectivity projects identified in this Plan (or other connectivity projects) completed. Tracking and classifying completed projects in terms of the benefits they are providing (e.g., connectivity, safety), and maintaining this information in a GIS database will allow for easy reporting of this performance metric.	Public Works	Community & Economic Development Parks & Recreation
9C	Volumes of Users Performance Metric: Increase the number of people walking and biking. Indicator of Success: Annual increase in the number of people walking and biking. Lacey currently hosts two permanent bicycle and pedestrian counters on the Woodland and Chehalis Western Trails near the intersection of the two trails. Data from these counters can be obtained from WSDOT at wsdot.wa.gov/data/tools/bikepedcounts. The City should expand its count program to include additional permanent counters, as well as short duration counts conducted manually or using automatic counters. At a minimum, the City should be active partners in the <u>National Bicycle</u> <u>Pedestrian Count Program coordinated by WSDOT</u> .	Public Works	Community & Economic Development Parks & Recreation Woodland Trail Greenway Association
9D	Resident Satisfaction Performance Metric: Degree to which the travel needs of people of all ages and abilities are being met and walking and biking are perceived as viable and attractive forms of transportation for a variety of purposes. Indicator of Success: A growing number of respondents' needs are met in terms of being able to safely and conveniently get around by foot or bicycle. Recurring surveys provide elected officials and decision-makers with objective data for determining the City's performance and attitudes related to a variety of topics, including walking and biking infrastructure. They are an important part of providing the highest quality of services to residents, businesses, and visitors. A citywide survey would be useful in recognizing the importance of bicycling and walking infrastructure and programs by providing data on how many people bicycle or walk for different trip purposes, to track over time; and providing information on people's attitudes and satisfaction towards existing bicycling and walking facilities.	Community & Economic Development	Public Affairs

[1] Achieving Multimodal Networks: Applying Design Flexibility and Reducing Conflicts, FHWA, 2016.

Implementation

This Plan identifies a wide range of solutions and strategies to improve walking and biking in the City of Lacey and its UGA. The policy- and program-related strategies will require coordination among internal and external stakeholders and their implementation will depend on institutional capacity, funding, and community process and involvement. Infrastructure project recommendations range in terms of their complexity, ease of implementation and funding needs. In some cases, projects can be implemented through retrofitting existing streets with minimal design effort or impacts to other travel modes. In other cases, projects may be more capital-intensive, require additional analysis, design and community involvement, and largely depend on external funding sources.

> This Plan recommends infrastructure projects within the City's Urban Growth Area, which is currently under the jurisdiction of Thurston County. Portions of the UGA will eventually be annexed by the City. The City and County jointly plan for the UGA, and the City has included the UGA in this planning effort to be proactive about ensuring network connectivity and making these areas better for walking and biking. Implementation of projects within the UGA will require coordination with Thurston County.

Priority Projects

There are three general types of infrastructure project recommendations: spot improvements, bicycle segments, and pedestrian segments. Some of these projects are relatively low-cost and easy to implement while other projects will be part of larger roadway or other capital projects. Still others may require cooperative agreements with other jurisdictions or property owners.

While all parts of the planned pedestrian and bicycle networks are important, the City has a finite amount of resources available to implement the recommendations in this Plan. Some portions of the planned networks are more likely to provide a higher return on investment because of the destinations or populations served, ease of implementation, and/or ability to garner external funding such as grants. All projects have been subjected to a prioritization process to determine and compare the likely benefits they would provide. This process involved both quantitative factors such as safety, demand, equity, planning-level costs, and network connectivity, as well as qualitative factors such as public input and upcoming opportunities. The prioritization factors and how each factor was weighted can be seen in Appendix C. A full list of projects that includes the priority score for each project is also provided in Appendix C. Priority (Build Momentum) projects are listed below.





Build Momentum Projects

The projects listed below are intended to build momentum – one of the three principles of this Plan – because they are generally low-cost and easy to implement relative to other projects. Completion of these projects would provide substantial benefits in terms of closing network gaps and improving the safety and experience of people walking and biking. The list also includes several projects that are not necessarily low-cost, but would provide a big impact and further build momentum towards fully implementing all the projects in this Plan. The list includes the Plan ID, which are also displayed on the project recommendation maps (Figures 3 - 5) in Section III, the recommendation type, the project extent and the primary benefits provided by the project. **A full list of projects with priority scores, project descriptions, and order of magnitude costs is provided in Appendix C.**

	Plan ID	Recommendation Type	Street Name/ Location	From Street	To Street	Project Benefits					
						Access to School	Access to Transit	Access to Park	Access to Shopping	All Ages and Abilities	
	2	Neighborhood Connection	Meriwood Dr, Vashon Dr	46th Ave	41st Ave					Ø	
	4	Neighborhood Connection	Campus Glen Dr	Wilamette Dr	Hogum Bay Road	\bigcirc		\bigcirc		\bigcirc	
	13	Major Street Connection	Pacific Ave	Homann Dr	Golf Club Rd	\bigcirc	\bigcirc	Ø	0		
	16	Neighborhood Connection	Judd St	Yelm Hwy	Ruddell Rd	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc	
	20	Neighborhood Connection	26th Ave, Sunset Dr	Judd St	Maple Hills Dr		Ø	Ø	0	Ø	
	23	Major Street Connection	Roxanna Dr, Intelco Loop, Corporate Center Drive	Chehalis Western Trail	Yelm Hwy, College St		0	0	•		
	24	Neighborhood Connection	33rd Ave, 37th Ln, 37th Ave	Stikes Dr	Stanfield Rd	Ø	Ø	Ø	0	Ø	
	31	Neighborhood Connection	Ruddell Rd	Yelm Hwy	66th Ave	\bigcirc	\bigcirc	\bigcirc	0	\bigcirc	
	32	Neighborhood Connection	66th Ave	Rainier Rd	Balustrade Blvd		Ø	Ø	0	Ø	
·	33	Neighborhood Connection	67th Ave	Chehalis Western Trail	Rainier Rd	\bigcirc	\bigcirc	\bigcirc		\bigcirc	

Table 1: Build Momentum Projects



		Recommendation Type	Street Name/ Location	From Street	To Street	Project Benefits					
	Plan ID					Access to School	Access to Transit	Access to Park	Access to Shopping	All Ages and Abilities	
	20	Pedestrian Focus Routes	Lacey Elementary (Route TBD)		Ø	Ø	Ø	0	Ø	
*	18	Sidewalk Connection	22nd Ave	Judd St	Ruddell Rd	Ø	Ø			Ø	
	31	Sidewalk Connection	37th Ave; 37th Ln; 33rd Ave	Ruddell Rd	Carpenter Rd		Ø	Ø		Ø	
	34	Pedestrian Focus Routes	Woodland Elementary	Route TBD	Route TBD	Ø	\bigcirc			Ø	
•	30	Sidewalk Connection	37th Ave	Chehalis Western Trail	College St	Ø	Ø	Ø		Ø	
	21	Sidewalk Connection	Shady Lane Rd	Trillium St	Carpenter Rd	Ø	\bigcirc	\bigcirc		Ø	
	7	Pedestrian Focus Routes	South Sound H.S., North Thurston H.S., and Chinook M.S (Route TBD)			Ø				Ø	
/	10	Crossing	Pacific Ave and Ruc	ddell Rd		\bigcirc	\bigcirc	\bigcirc	\bigcirc	Ø	
	11	Crossing	Pacific Ave and Fra	nz St		\bigcirc			S		
	26	Crossing	54th Ave and Ruddell Rd			\bigcirc	Ø	\bigcirc		\bigcirc	
	5	Crossing	Golf Club Rd and I-5 Trail				\bigcirc		\bigcirc	\bigcirc	
	27	Crossing	Ruddell Rd and Yelm Hwy				\bigcirc		Ø	Ø	
	15	Crossing	Ruddell Rd and Judd St/15th Ave SE			\bigcirc	\bigcirc	\bigcirc	Ø	Ø	
	36	Crossing	Martin Way and Ga	laxy Dr			\bigcirc		S		
	25	Crossing	Ruddell Rd at Rainier Vista Community Park				Ø	\bigcirc		0	
	28	Wayfinding	Yelm Hwy and Park	side Dr			Ø	0	Ø	0	
	24	Crossing	45th Ave and Stikes	s Dr			-		-		
	16	Other	19th Ave, 20th Ave, and 21st Ave at Mountain View			\bigcirc		-		0	

Pedestrian Segment Projects

Bicycle and Pedestrian Spot Improvement Projects In addition to the projects listed in Table 1 above, there are some projects within the Urban Growth Area that are low- to moderate-cost that would provide high benefit. These projects include:

Bike lanes and sidewalks along Steilacoom Rd between Pacific Ave and Deerbrush Dr.

Pedestrian Focus Routes associated with Lydia Hawk, Olympic View and Meadows Elementary Schools, as well as River Ridge High School.

Crossing enhancements at Pacific Ave and Lake Lois Road SE and Ranger Dr SE

Modification to the gate/fence at 3rd Ave entrance to River Ridge High School to allow unimpeded access for students biking to school.

Implementation of these projects will require coordination with Thurston County.

Funding This Plan

Currently the City of Lacey does not have a dedicated funding source for implementing the projects identified in this Plan. Without a dedicated funding source, project implementation will rely on grant funding or larger roadway resurfacing or capital projects that could incorporate one or more of the projects listed in this Plan. There are a variety of funding mechanisms that are either currently available or could be put in place to fund implementation. Below is a discussion of these mechanisms.

Local Funding Mechanisms

Cities that want to make steady progress towards improving pedestrian and bicycle infrastructure are more successful when they establish a dedicated funding source rather than solely relying on grant funding, which can be uncertain. Establishing a dedicated local funding mechanism would lend predictability to the planning, design and construction of projects identified in this Plan and allow the City to take a more systematic approach to implementation as opposed to a piecemeal approach that often is taken when relying on grant funding. Dedicated funding may come in a variety of forms including setting aside funds from the General Fund specifically to fund non-motorized TIP projects or special tax or bond measures enabled by state legislation.

Transportation Improvement Program

The City Council may choose to dedicate a specific amount of funds from its General Fund to fund pedestrian and bicycle projects in the City's Transportation Improvement Program (TIP). There are a number of cities that have set aside specific amounts of funding for pedestrian and bicycle projects in their TIP, including Vancouver, WA which as part of its transportation funding strategy, established two permanent funds in its TIP that benefit walking and biking. The Neighborhood Traffic Management Program, which focuses primarily on traffic calming projects, is allocated \$270,000 per year and the Multimodal Safety and Accessibility Program is allocated \$500,000 per year. This dedicated funding is a direct response to the community voicing the importance of mobility, safety and neighborhood projects. Other components of Vancouver's transportation funding strategy includes a combination of revenue sources including utility tax, business license tax, and vehicle license fee.

Local Tax Levy

Voter-approved property tax levies can be used for a variety of purposes in Washington State, including transportation. The City of Bellevue passed a \$0.15 per \$1,000 assessed value levy in 2016 to fund a backlog of small locallyoriented projects, including sidewalks and trails, traffic calming, bicycle lanes, lighting, safety monitoring technology and maintenance. The levy is expected to generate about \$6.7 million per year for 20 years. The City of Bothell passed its Safe Streets & Sidewalks levy in 2016, which is a nine-year levy funding program that provides \$4 million per year for improving the condition of major streets, constructing sidewalks and crosswalks around schools, sidewalk repair and replacement, street operations and pavement striping and markings. The levy rate is \$0.50 per \$1,000 of assessed value.

Bond Measure

Cities may issue bonds to fund transportation projects, and can specifically focus such bond measures on improving walking and biking. Bonds are loans that require a dedicated funding source for repayment, which typically comes in the form of a voter-approved tax increase. The City of Kenmore, WA provides a good example. Through its Walkways and Waterways bond measure in 2016, the city will fund \$19.75 million in projects that improve safety and access for people walking and biking, as well as shoreline access. The voter-approved bond measure was largely successful because it identified a relatively small number of projects that were community priorities and committed to fairly rapid implementation (within 7 years).

Existing Local Funding Sources

The City of Lacey currently has several funding sources that will contribute to the funding of this Plan's project recommendations. In addition, projects identified in this Plan could be implemented as part of larger maintenance and improvement projects.

Impact Fees

The City of Lacey currently applies impact fees to new development based on land use and associated number of trips the use is expected to generate. Impact fees are intended to pay for upgrades to infrastructure to mitigate the impact of new development. The City will continue to leverage impact fees to provide matching funds for various grant programs that would allow for the implementation of larger projects. The City also allows credit towards payment of impact fees if a new development pays for the installation of an identified infrastructure need such as the projects identified in this Plan. For example, a development adjacent to a new crossing that has been identified in this Plan could pay for that crossing and have the cost subtracted from the total impact fees that development would have to pay. Thurston County charges impact fees to development occurring within the City's UGA.

City of Lacey Transportation Benefit District (TBD)

The City of Lacey established the Transportation Benefit District (TBD) through a special election vote in 2017. The TBD is funded through an additional 0.2 percent local sales tax increase, and the revenue will be used to fund transportation maintenance and improvement projects within the City. The City projects to raise between \$1.6 to \$1.8 million per year through the TBD. Through the TBD, the City will perform essential street and sidewalk maintenance and repairs to extend the infrastructure's use and to delay costly full reconstruction projects. Street overlay (resurfacing) projects are one project type example that provides opportunities for implementing bicycle facilities where there are opportunities to reallocate right-of-way when the roadway is restriped.

City of Lacey Real Estate Excise Tax (REET)

Comprised of one-quarter of one percent of the selling price for each real estate property transaction within the City, the Real Estate Excise Tax (REET) is placed by the Thurston County treasurer into Lacey's capital improvements funds for local improvements. The City uses 100% of the REET exclusively for transportation capital improvements despite the ability to use these funds for maintenance and operations. REET funds have not been linked to specific projects, but typically are used for grant matches and for transportation projects where City funds are identified as funding sources.

Motor Vehicle Fuel Tax (MVFT)

Per RCW 47.30.050 0.42% of the MVFT must be spent on shared use paths and trails and the has City used these funds to help build out its trail network and implement other related infrastructure.

Grants and Other Funding Opportunities

There are a variety of grant programs and other funding sources at the regional, state and federal level available for the types of projects this Plan identifies. The City has been successful in securing funding through many of these sources such as WSDOT's Safe Routes to School program, as well as federal funding distributed through the Thurston Regional Planning Council. A complete list of funding sources is provided in Appendix D.